CLAIMS

1.   A method for simulating wearing of a knit garment on a human model, the knit garment being a virtual knit garment and having a plurality of parts, the human model being a three-dimensional human model and comprising a plurality of polygons, the method comprising the steps of:

providing the human model with a plurality of axes;

matching each of the parts of the knit garment with any of the plurality of axes and temporarily positioning the knit garment with respect to the human model; and

shrinking/expanding the temporarily positioned knit garment toward the axis matched with each of the parts of the knit garment, whereby the knit garment is worn on the human model.

2.   The method for simulating wearing of claim 1, wherein:

the human model comprises at least a torso and both arms, along with an axis of the torso, and axes of the right and left arms;

the plurality of parts of the virtual knit garment comprises at least a body and sleeves, each of the parts is matched with any of the axes of the human model, and the temporal positioning is performed so that the axis matched with each of the parts passes through the inside of each of the parts;   and

both of the sleeves of the virtual garment are shrunk/expanded such that upper parts of the both sleeves contact with upper parts of the arms of the human model and spaces are provided at lower parts of the both sleeves with respect to the upper parts of the arms of the human model.

3.   The method for simulating wearing of claim 2, wherein after wearing the virtual knit garment on the human model, each stitch of the virtual knit garment is rearranged along a course direction and a wale direction of the virtual knit garment, whereby distortions between parts having different matching axes on the virtual knit

garment are removed.

4.   The method for simulating wearing of claim 1, wherein after wearing the knit garment, each of stitches of the knit garment is moved close to a mean position of surrounding stitches, whereby positions of the stitches of the knit garment are smoothed, and the smoothing is repeatedly performed.

5.   A device for simulating wearing of a knit garment on a human model, the knit garment being a virtual knit garment and having a plurality of parts, the human model being a three-dimensional human model and comprising a plurality of polygons,   the device comprising:

        storage means for storing positions of a plurality of axes provided on the human model;

        matching means for matching each of the parts of the knit garment with any of the plurality of axes;

        temporary arranging means for temporarily arranging each of the parts, within a three-dimensional space, so as to surround the matching axis; and

        wearing means for shrinking/expanding each of the parts toward the matching axis,

        wherein the knit garment which is temporarily positioned with respect to the axes is shrunk/expanded toward the axis matched with each of the parts, and thereby worn on the human model.

6.   The device for simulating wearing of claim 5, wherein the virtual knit garment comprises a body and both sleeves, the human model comprises a torso, both arms, and axes of the torso and the both arms, and, by way of the wearing means, the both sleeves of the virtual garment are shrunk/expanded such that upper parts of the both sleeves contact with upper parts of the arms of the human model and spaces are provided at lower parts of the both sleeves with respect to the lower parts of the arms of the human

model.

7. The device for simulating wearing of claim 6, further comprising correction means for, after wearing the virtual knit garment on the human model, rearranging stitches along a course direction and a wale direction of the virtual knit garment to remove distortions between parts having different matching axes on the virtual knit garment.

8. The device for simulating wearing of claim 5, further comprising:

smoothing means for smoothing positions of stitches of the knit garment by moving each of the stitches of the knit garment close to a mean position of surrounding stitches after wearing the knit garment on the human model; and

repeating means for causing the smoothing means to repeatedly perform the smoothing of the positions of the stitches.

9. A program of simulating wearing of a knit garment on a human model, the knit garment being a virtual knit garment and having a plurality of parts, the human model being a three-dimensional human model and comprising a plurality of polygons, the program comprising:

a storing command for storing positions of a plurality of axes provided on the human model;

a matching command for matching each of the parts of the knit garment with any of the plurality of axes;

a temporary arranging command for temporarily arranging each of the parts, within a three-dimensional space, so as to surround the matching axis; and

a wearing command for shrinking/expanding each of the parts toward the matching axis,

wherein the knit garment which is temporarily positioned with respect to the axes is shrunk/expanded toward the axis matched with each of the parts, and thereby

worn on the human model.

10.   The program of simulating wearing of claim 9, wherein

the virtual knit garment comprises a body and both sleeves, the human model comprises a torso, both arms, and axes of the torso and the both arms, and

by way of the wearing command both sleeves of the virtual garment are shrunk/expanded such that upper parts of the both sleeves contact with upper parts of the arms of the human model and spaces are provided at lower parts of the both sleeves with respect to the lower parts of the arms of the human model.

11.   The program of simulating wearing of claim 10, further comprising a correction command for, after wearing the virtual knit garment on the human model, rearranging stitches along a course direction and a wale direction of the virtual knit garment to remove distortions between parts having different matching axes on the virtual knit garment.

12.   The program of simulating wearing of claim 9, further comprising:

a smoothing command for smoothing positions of stitches of the knit garment by moving each of the stitches of the knit garment close to a mean position of surrounding stitches after wearing the knit garment on the human model; and

a repeating command for repeatedly executing the smoothing command.